Acknowledgements

I am grateful to Prof. S.K. Sen, PMCG, Bose Institute, for providing me the necessary facilities and guidance for the whole work.

I am grateful to the C.S.I.R. for providing me financial support to carry out this project.

I am grateful to Dr. M.R. Singh, IICB, for helping me in the purification of the protein. I am indebted to Dr. A. Sinha, ASTRA, Bangalore, for guiding me in synthesising cDNA. I also thank Dr. A. Basu for helping me in DNA-sequencing. I remember Mrs. Pushpita Mukherjee for her continuous support in the tissue culture of plants. Rishi helped me when I faced technical problems.

I am very much thankful to Dr(s). S. Das, P. Nayak, S. R. Sikdar, N. J. Gupta, A. Lahiri Majumdar, D. Basu, T. Saha for their support and suggestions during the whole work.

I am happy to acknowledge Chaitali, Sami, Papia, Soma(1), Soma(2), Sanchita, Krishna, Sushma, Sanjib, D. Ghosh, D. Das, A. Nandi, A. Mondal. They made my research life memorable in more ways than can be described.

I want to thank Messers B. Pradhan, A. Dey, T. Mondal, and other technical assistants of the laboratory and of the experimental station at Madhyamgram for their infrastructural role.

I am thankful to my friends Rishi, Tony, Sanchayita who share my joy and frustrations.

I also thank Dr. I. Ghosh and Dr. S. Datta, ASTRA, Bangalore, for their critical suggestions and proofreading the draft copies of this document.

I know that my family brought me up, provided me with education and inspired me to keep learning. The family just got larger and more broad-based after my marriage.

Siddhartha helped me write this thesis up. He urged me to write on and saw me through \LaTeX. He also is my cheerleader, friend, philosopher and copy-editor. I thank his institute and his colleagues for providing the documentation facilities and his students for helping out technically during the process.